

CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method comprising:

determining one or more packet tag values of one or more newly received packets over a connection has changed from previously received packet tag values; and

~~modulating, using a delayed response,~~ the policy applied to the one or more packets in response to identifying the change in the one or more packet tag values ~~using a hysteresis response.~~

2. (Currently amended) An apparatus comprising:

an intra-flow modulator to modulate policies applied to packets of a connection using a ~~hysteresis~~ delayed response, wherein the intra-flow policy modulator comprises

a classification module to receive incoming traffic, assign a traffic class to the incoming traffic based on a packet tag in the incoming traffic, and vary the traffic class applied to ~~[[a]]~~ the connection in response to receipt of a different priority tag in the incoming traffic; and

a policy module to assign a policy to the incoming traffic based on the assigned traffic class and to control outgoing traffic based on the assigned policy for the assigned traffic.

3. (Currently amended) The apparatus defined in Claim 2 wherein the intra-flow policy modulator performs the ~~hysteresis~~ delayed response when varying traffic classes in response to the different packet tag having a higher priority.

4. (Original) The apparatus defined in Claim 2 wherein the connection comprises a TCP connection.

5. (Original) The apparatus defined in Claim 2 wherein the classification module identifies a service type associated with the incoming packet and determines whether to change the traffic class assignment based on the service type.

6. (Original) The apparatus defined in Claim 5 wherein the classification module determines whether to change the traffic class assignment is based on the service type associated with the incoming packet.

7. (Original) The apparatus defined in Claim 2 wherein the classification module uses a mapping of tag bits to its traffic class and a policy.

8. (Original) The apparatus defined in Claim 7 wherein the classification module changes the mapping between at least one of the plurality of tag bits and its traffic class and policy based on a set of classification change rules.

9. (Original) The apparatus defined in Claim 2 wherein the policy module applies a policy to the incoming traffic based on assigned traffic class and controls outgoing traffic based on the assigned policy for the incoming traffic.

10. (Original) The apparatus defined in Claim 9 wherein the policy manager controls the outgoing traffic by providing less importance to traffic having a first type of tag and more importance to traffic having a second type of tag using the assigned policy for the incoming traffic.

11. (Currently amended) A method comprising:

mapping policies to traffic classes associated with flows of packets in a network;
modulating assignment of traffic classes to individual connections in the network based on one or more changes in packet tags of packets within respective ones of the individual connections using a hysteresis delayed response.

12. (Currently amended) An apparatus comprising:

means for mapping policies to traffic classes associated with flows of packets in a network;

means for modulating assignment of traffic classes to individual connections in the network based on one or more changes in packet tags of packets within respective ones of the individual connections using a hysteresis delayed response.

13. (Currently amended) A method comprising:

assigning a first traffic class to incoming traffic within a connection based on a first ICA Virtual Channel Tag of a first packet in the incoming traffic; and

assigning a second traffic class to the incoming traffic within the connection
~~changing the traffic class~~ based on a second ICA Virtual Channel Tag of a second

packet within the connection in the incoming traffic to reclassify the connection in response to changes in ~~packet tags~~ ICA Virtual Channel Tags.

14. (Original) The method defined in Claim 13 wherein the incoming traffic includes a sequence of packets in order for which out of order delivery degrades performance for the single connection.

15. (Original) The method defined in Claim 13 wherein the connection comprises a TCP connection.

16. (Original) The method defined in Claim 13 further comprising varying policies applied to the connection.

17. (Original) The method of Claim 13 further comprising determining a relative importance of different types of tagged traffic within one TCP connection.

18. (Currently amended) The method defined in Claim 13 further comprising:
identifying a service type associated with the incoming second packet; and
determining to change the traffic class assignment for incoming traffic of the connection based on the service type.

19. (Currently amended) The method defined in Claim 18 wherein determining whether to change the traffic class assignment is based on the service type associated with the incoming second packet.

20. (Currently amended) The method defined in Claim 18 further comprising:
checking for a policy for the second traffic class;
applying the policy to the connection.
21. (Currently amended) The method defined in Claim 13 further comprising
mapping a plurality of ~~packet-tags~~ ICA Virtual Channel Tags to a traffic class and a
policy.
22. (Currently amended) The method defined in Claim 21 further comprising
changing a mapping between at least one of the plurality of ~~packet-tags~~ ICA Virtual
Channel Tags and its traffic class and policy based on a set of classification change
rules.
23. (Currently amended) The method defined in Claim 13 further comprising:
applying a policy to the incoming traffic based on an assigned traffic class; and
controlling outgoing traffic based on the assigned policy for the incoming traffic.
24. (Original) The method defined in Claim 23 wherein the controlling of the
outgoing traffic includes providing less importance to traffic having a first type of ICA
Virtual Channel Tag and more importance to traffic having a second type of ICA Virtual
Channel Tag using the assigned policy for the incoming traffic.

25. (Original) The method defined in Claim 13 wherein the incoming traffic comprises print traffic.

26. (Currently amended) The method defined in Claim 13 wherein the connection comprises a Citrix connection, and further comprising:

specifying subclasses within a Citric ICA service that correspond to a mapping of the traffic class to the Virtual Channel Traffic Tag value;

assigning a policy to each of the subclasses;

recognizing a change in the virtual channel traffic tag value while receiving packets in the connection; and

switching the traffic class to another in response to the change in the virtual channel traffic tag value.

27. (Currently amended) The method defined in Claim 13 wherein the connection comprises a Citric connection, and further comprising:

receiving a packet having a virtual channel priority tag numerically larger than the virtual channel priority tag of a previous packet;

switching the first traffic class to a new traffic class assigned to the largest priority tag value.

28. (Original) The method defined in Claim 27 further comprising

remaining in the new traffic class for a period of time; and

switching to the first traffic class assigned to next largest priority tag value after a predetermined time.

29. (Currently amended) An apparatus comprising:

a classification module operative to receive incoming traffic and to assign a first traffic class to the incoming traffic based on a ICA Virtual Channel Tag in the incoming traffic, wherein the classification module varies the assigned traffic class applied to a connection in response to receipt of a different IC Virtual Channel Tag in the incoming traffic; and

a policy module operative to assign a policy to the incoming traffic based on the assigned traffic class and to control outgoing traffic based on the assigned policy for the incoming traffic.

30. (Original) The apparatus defined in Claim 29 wherein the incoming traffic includes a sequence of packets in order for which out of order delivery degrades performance for the single connection.

31. (Original) The apparatus defined in Claim 29 wherein the connection comprises a TCP connection.

32. (Original) The apparatus defined in Claim 29 wherein the classification module identifies a service type associated with the incoming packet and determines whether to change the traffic class assignment based on the service type.

33. (Currently amended) The apparatus defined in Claim 32 wherein the classification module determines whether to change the traffic class assignment [[is]] based on the service type associated with the incoming packet.

34. (Original) The apparatus defined in Claim 29 wherein the policy module assigns a policy to each traffic class.

35. (Currently amended) The apparatus defined in Claim 29 wherein the classification module maps a plurality of ICA Virtual Channel Tags ~~packet-tags~~ to a traffic class and a policy.

36. (Currently amended) The apparatus defined in claim 35 wherein the classification module changes a mapping between at least one of the plurality of ICA Virtual Channel Tags ~~packet-tags~~ and its traffic class and policy based on a set of classification change rules.

37. (Original) The apparatus defined in Claim 29 wherein the policy module applies a policy to the incoming traffic based on assigned traffic class and controls outgoing traffic based on the assigned policy for the incoming traffic.

38. (Original) The apparatus defined in Claim 37 wherein the policy manager controls the outgoing traffic by providing less importance to traffic having a first type of ICA Virtual Channel Tag and more importance to traffic having a second type of ICA Virtual Channel Tag using the assigned policy for the incoming traffic.

39. (Original) The apparatus in Claim 29 wherein incoming traffic comprises print traffic.

40. (Original) The apparatus defined in Claim 29 wherein the packet tag comprises a priority tag.

41. (Currently amended) An apparatus comprising:

means for assigning a first traffic class to incoming traffic within a connection based on a first ICA Virtual Channel Tag of a first packet in the incoming traffic; and

means for changing the traffic class assigned to the incoming traffic based on a second ICA Virtual Channel Tag of a second packet within the connection in the incoming traffic, such that the connection is reclassified in response to changes in ICA Virtual Channel Tags ~~packet tags~~.

42. (Currently Amended) A computer-readable medium storing logic for execution, the logic when executed operable to cause a computing system to: ~~An article of manufacture having a machine-readable medium with executable instructions thereon which, if executed by a computing system, causes the computing system to:~~

assign a first traffic class to incoming traffic within a connection based on a first ICA Virtual Channel Tag of a first packet in the incoming traffic; and

change the traffic class assigned to incoming traffic based on a second ICA Virtual Channel Tag of a second packet within the connection in the incoming traffic, such that the connection is reclassified in response to changes in ICA Virtual Channel Tags ~~packet tags~~.

43-47. (Canceled)

48. (Currently amended) A bandwidth manager comprising:

a TCP conditioner-based policy modulator to modulate policies applied to packets of a TCP connection based on a determination as to whether each of the packets will arrive substantially out of order, wherein the TCP conditioner-based policy modulator comprises

a classification module to receive incoming traffic, assign a traffic class to the incoming traffic based on a packet tag in the incoming traffic, and vary the traffic class applied to ~~[[a]]~~ the connection in response to receipt of a different packet tag in the incoming traffic; and

a policy module to assign a policy to the incoming traffic based on the assigned traffic class and to control outgoing traffic based on the assigned policy for the incoming traffic.

49. (Currently amended) The bandwidth manager defined in Claim 48 wherein the ~~intra-flow TCP conditioner-based~~ policy modulator performs ~~[[the]]~~ a delayed hysteresis response when varying traffic classes in response to the different packet tag having a higher priority.

50. (Currently amended) The bandwidth manager defined in Claim 48 wherein the classification module identifies a service type associated with the incoming traffic ~~packet~~ and determines whether to change the traffic class assignment based on the service type.

51. (Currently amended) The bandwidth manager defined in Claim 50 wherein the classification module determines whether to change the traffic class assigned to the incoming traffic ~~assignment~~ is based on the service type associated with the incoming traffic packet.

52. (Original) The method defined in Claim 48 wherein the classification module uses a mapping of tag bits to its traffic class and a policy.

53. (Original) The method defined in Claim 52 wherein the classification modules changes the mapping between at least one of the plurality of tag bits and its traffic class and policy based on a set of classification change rules.

54. (Original) The bandwidth manager defined in Claim 48 wherein the policy module applies a policy to the incoming traffic based on assigned traffic class and controls outgoing traffic based on the assigned policy for the incoming traffic.

55. (Original) The bandwidth manager defined in Claim 54 wherein the policy manager controls the outgoing traffic by providing less importance to traffic having a first type of tag and more importance to traffic having a second type of tag using the assigned policy for the incoming traffic.

56-57. (Canceled)